

REMARKS

Reconsideration and withdrawal of the rejections to this application are respectfully requested in view of the following remarks which place the application in condition for allowance.

This application relates to, *inter alia*, liquid formulations of insecticides, such as pyrethroids, in the form of oil-in-water emulsions.

Claims 1-14 are pending. Claims 1 and 4-6 were amended, and claims 13 and 14 were added, without prejudice, to advance prosecution. The amendment and the remarks made herein are not made for reasons related to patentability and, thus, do not prevent the application of the doctrine of equivalents. Support for the amended recitations in the claims is found throughout the specification.

No new matter has been added.

The abstract was objected to for being in claim format. A new abstract is attached hereto to replace the abstract as originally filed, thereby obviating the objection. Consequently, reconsideration and withdrawal of the objection to the abstract are respectfully requested.

Claims 1-6 were rejected under 35 U.S.C. §112, second paragraph, as allegedly being indefinite. The rejection is traversed. The amendments to the claims render the rejection moot. Consequently, reconsideration and withdrawal of the Section 112, second paragraph, rejections are respectfully requested.

Claims 1-6 were rejected under 35 U.S.C. §102(b) as allegedly being anticipated by WO 96/01047 to Heriet et al; claims 1-6 were rejected under 35 U.S.C. §102(b) as allegedly being anticipated by U.S. Patent No. 5,435,992 to Audegond et al; and claims 1-6 were rejected under

35 U.S.C. §103(a) as allegedly unpatentable over U.S. Patent No. 6,068,849 to Mueninghoff et al. in view of Heriet. The rejections will be collectively addressed and are respectfully traversed. The cited documents do not teach, enable, suggest or motivate a skilled artisan to practice the instantly claimed invention.

It is respectfully pointed out that a two-prong inquiry must be satisfied in order for a Section 102 rejection to stand. First, the prior art reference must contain all of the elements of the claimed invention. *See Lewmar Marine Inc. v. Bariant Inc.*, 3 U.S.P.Q.2d 1766 (Fed. Cir. 1987). Second, the prior art must contain an enabling disclosure. *See Chester v. Miller*, 15 U.S.P.Q.2d 1333, 1336 (Fed. Cir. 1990). A reference contains an enabling disclosure if a person of ordinary skill in the art could have combined the description of the invention in the prior art reference with his own knowledge of the art to have placed himself in possession of the invention. *See In re Donohue*, 226, U.S.P.Q. 619, 621 (Fed. Cir. 1985).

Further, in order to ground an obviousness rejection, there must be some teaching which would have provided the necessary incentive or motivation for modifying the reference's teaching. *In re Laskowski*, 12 U.S.P.Q. 2d 1397, 1399 (Fed. Cir. 1989); *In re Obukowitz*, 27 U.S.P.Q. 2d 1063 (B.P.A.I. 1993). Further, "obvious to try" is not the standard under 35 U.S.C. §103. *In re Fine*, 5 U.S.P.Q. 2d 1596, 1599 (Fed. Cir. 1988). And as stated by the Court in *In re Fritch*, 23 U.S.P.Q. 2d 1780, 1783-1784 (Fed. Cir. 1992): "The mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggests the desirability of the modification." Also, the Examiner is respectfully reminded that for the Section 103 rejection to be proper, both the suggestion of the

claimed invention and the expectation of success must be founded in the prior art, and not Applicants' disclosure. *In re Dow*, 5 U.S.P.Q.2d 1529, 1531 (Fed. Cir. 1988).

The instant invention is not anticipated by either Heriet or Audegond. Further, the requisite teaching, suggestion or motivation is lacking in the Mueninghoff and Heriet documents, thereby rendering the obviousness rejections equally defective.

Heriet does not teach and enable each and every element of Applicants' invention. Heriet relates to an EC (emulsifiable concentrate). The formulations according to the instant invention, by contrast, are oil-in-water emulsions. Further, Heriet does not teach or enable an emulsifier system comprising one or more anionic surfactants and two or more non ionic surfactants, one of which has a HLB value between 4 and 12 and one of which has a HLB value between 12 and 20, together with film forming agents and/or thickeners.

Audegond is equally defective as evidence of anticipation. Like Heriet, Audegond relates to an EC, not an oil-in-water formulation. Further, Audegond neither teaches nor enables film forming agents/thickeners and does not disclose the concept of an emulsifier system comprising one or more anionic surfactants and two or more non ionic surfactants, one of which has a HLB value between 4 and 12 and one of which has a HLB value between 12 and 20.

As neither Heriet nor Audegond teach and enable each and every element of the instant invention, the rejection must fail as a matter of law. Consequently, reconsideration and withdrawal of the Section 102 rejections are respectfully requested.

Turning to the obviousness rejections, Applicants respectfully assert that the requisite teaching, suggestion or motivation is lacking in the documents relied upon in the Office Action.

The Examiner alleges that the present invention would have been obvious over Mueninghoff in view of Heriet. This, however, is not accurate. Mueninghoff relates to EC formulations, not EW formulations, and discloses neither the use of a film forming agent/thickener nor an emulsifier system comprising one or more anionic surfactants and two or more non ionic surfactants, one of which has a HLB value between 4 and 12 and one of which has a HLB value between 12 and 20.

Heriet does not remedy these inherent deficiencies. As explained above, Heriet also fails to teach or suggest oil-in-water emulsions. In addition, neither of the two documents teaches or suggests the use of a film forming agent/thickener, and neither document discloses the concept of emulsifier system according to the invention.

More specifically, a combination of these references does not render obvious an EW formulation having improved toxicological properties in addition to good storage stability. ECs, such as those taught in Mueninghoff and Heriet, belong to a different technical field than EWs. The technical problems encountered in production, storage and use of ECs are of a completely different nature than for EWs. For example:

- Storage stability: ECs usually have less storage problems because they have a solution of active ingredient and surfactant(s) in one or more solvents without water. EW formulations, on the other hand, are produced as emulsions and have to remain stable as emulsions during storage before application. This means that effects like flocculation, precipitation and especially segregation and breaking of the emulsion have to be avoided, some of which do not appear in ECs. EWs, therefore, usually contain specific components which are often completely different from the ones used in ECs.

- Surfactant systems: EW formulations have higher demands on the surfactant system, which helps create and maintain a stable emulsion. With ECs, by contrast, a strongly diluted emulsion is formed only shortly before application. Therefore, such emulsions have to be stable only for a short period of time. In EWs the emulsion has to be stable for a long period of time at different temperatures during storage and still be able to form the final diluted emulsion with water prior to application. This explains why the demands on the surfactant system in EWs are much higher than for ECs.

Against this background, a skilled artisan would not be motivated to extrapolate EC concepts when developing new EW formulations. Further, a skilled artisan would not have considered Mueninghoff and Heriet when confronted with the problem to develop EW formulations with reduced toxicity.

Moreover, Applicants believe that the instant invention exhibits unexpected results and superiority over the art and, thus, rebuts any holding of *prima facie* obviousness. Attached hereto is a comparative study between the composition according to Example 13 of Heriet and the composition according to Example 10 of the instant specification. The comparative study shows the unexpected result that formulations according to the instant invention are less toxic than the ones disclosed by Heriet.

Therefore, even if it was so held that a person with ordinary skill in the art would have been motivated to practice the instant invention from a reading of the cited art, a point Applicants do not concede, the data submitted herewith and the conclusions contained therein clearly rebut such a holding since the cited art does not suggest that Applicants' invention would exhibit such superior toxicological results. The claimed invention, therefore, is unobvious.

Accordingly, reconsideration and withdrawal of the Section 102 and 103 rejections based on the preceding documents are respectfully requested.

As this paper is being submitted within the three-month term for reply set by the June 6, 2003 Office Action, no fee is believed to be due. In the event, however, a fee is occasioned by this paper, said fee, or any additional fees, may be charged, or overpayments credited to, Deposit Account No. 50-0320.

In view of the above remarks, it is respectfully submitted that this application is now in condition for allowance. Favorable consideration of the claims is earnestly solicited. If, however, there is still an outstanding issue, the Examiner is urged to contact the undersigned for its prompt attention.

Respectfully submitted,

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## Comparison Test

### Test

Rabbit eye irritancy – Test according to OECD guideline no. 405, February 24, 1987<sup>1</sup>

### Results

<u>Formulation</u>	<u>Results (Summary)</u>	<u>Interpretation of results<sup>2</sup></u>
Composition according to example 13 of D1 = WO96/01047	Irritant to rabbit eyes	Classification: indication of danger as “irritant” (Symbol: Xi + Risk phrase R36: “irritating to eyes”)
Composition according to example 10 of the present application	Slightly but reversibly irritant to rabbit eyes	No classification required

<sup>1</sup> Studies were conducted in compliance with the Principles of Good Laboratory Practice Regulations

<sup>2</sup> Interpretation of results according to the classification criteria laid down in Commission Directive 93/21/EEC (April 27. 1993) adapting to technical progress for the eighteenth Council Directive 67/548/EEC